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MASTER OF MILITARY STUDIES

TITLE:
**U.S. NAVY DECISIONS IN DECLINING BUDGET ERAS: ANALYSIS AND
RECOMMENDATIONS**

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

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Executive Summary

Title: U.S. Navy Decisions in Declining Budget Eras: Analysis and Recommendations

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Thesis: As the Navy enters a period of fiscal austerity, it must learn from its experiences and avoid cutting any single functional area too heavily and defer, rather than cut, expensive acquisition programs that are necessary to ensure technological advantages in future conflict.

Conclusion: Maintaining the current force at a sufficient state of readiness, while balancing procurement of the future fleet and researching creative solutions to technological challenges should be the Navy's focus. Short-term mission accomplishment that robs the fleet of long-term viability by shifting money from maintenance to operations cannot continue without detriment to the future force.

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Throughout its 237-year history the United States Navy has experienced budgets that ebb and flow, usually with the economy of the country it protects. All signs point toward a period of lower or flat budgets for the Navy in the near term.¹ This paper does not attempt to provide any specific solutions with regard to sequestration, but rather examines previous time periods and draws conclusions and recommendations from the lessons of the recent past. In attempting to make informed recommendations for the Navy, this paper explores the two most recent periods of budget tightening for the Navy, the early 1970s, in the aftermath of the Vietnam War, and the early 1990s following the Cold War. As the Navy enters a period of fiscal austerity, it must learn from experiences and avoid cutting any single functional area too heavily and defer, rather than cut, expensive acquisition programs that are necessary to ensure technological advantages in future conflict.

Background

Navy budgets rise and fall with demands and needs of the country. When needs are static, budget fluctuations tend to follow the larger federal budget, which itself often follows the United States' economy. In an effort to keep the scope of this paper manageable and relevant, the last two large reductions – the 1970s and 1990s – and the short period since shall be examined.

Methodology

In order to analyze the decisions made and balance what key figures said with what the Navy actually did, this paper will utilize historical budget accounting data. Specifically, the paper will focus on actual spending outlays and expenditures, rather than the authorizations and appropriations approved by Congress. To accomplish this accounting, budgets from 1962 to

¹ For the purposes of this paper, the near term is the U.S. government's 2014-2018 Fiscal Years' Defense Plan, or FYDP.

2013 provide outlays and expenditures from 1960 to 2011. Navy budget items are grouped into five major categories: personnel costs, to include housing construction, operation, and maintenance, as well as recently added contributions to Medicare/Medicaid; operations and maintenance, both active duty and reserve; procurement; research, development, testing and evaluation (RDT&E), and military construction (MILCON), both active duty and reserve. This paper also does not correct for inflation or make conversions to constant year dollars. Instead, this paper uses percentage of the total budget as the basis for comparisons between different eras. Whenever dollar amounts are referenced, the dollar amounts are not corrected for inflation and are taken directly from United States Budgets.

The Early 1970s

In 1965, then Secretary of Defense Robert MacNamara directed the Navy to pay for its Vietnam War expenses out of its base budget, rather than obtaining war-specific funding for increased operations. The money came primarily from the Navy's shipbuilding account. As a result, then Rear Admiral Zumwalt warned that the Navy was fast approaching a time where a large chunk of the fleet, primarily World War II era and FRAM destroyers, would retire in rapid succession. His study recommended a large building program to replace these ships, lest the Navy develop a tactical disadvantage, specifically in Anti-Submarine Warfare. Upon assuming office as Chief of Naval Operations five years later, Admiral Zumwalt announced his solution with a new shipbuilding plan that became known as the High-Low Mix. The plan sought to address concerns over both quantity and quality in the fleet by buying low quantities of high-tech, multi-mission combatants and increased numbers of mission-specific ships that were lower in cost. While some very good technology came into the fleet under this plan, the low-cost, high-quantity procurement never achieved the numbers Zumwalt predicted. As a result, the

Navy's fleet of cruisers and destroyers shrank precipitously from 240 such vessels in 1964 to only 96 destroyers and cruisers by 1976.¹ The mantra of a smaller, but better Navy became a theme.

President Richard Nixon and his Secretary of Defense, Melvin Laird, entered office in 1969 and began shrinking the Department of Defense's (DoD) budget. Between 1969 and 1975 the overall DoD budget shrank by 31%. Increases in oil costs, increased personnel costs due to the change from a draft-based force to an all-volunteer force, and overall budget reduction combined to increase pressure on defense spending. The Department of Defense consciously delayed new and higher-tech weapons procurement in order to stay within budget. These delays fell on the heels of previous delays caused by the Vietnam War. Procurement did not begin to rise appreciably until 1976.²

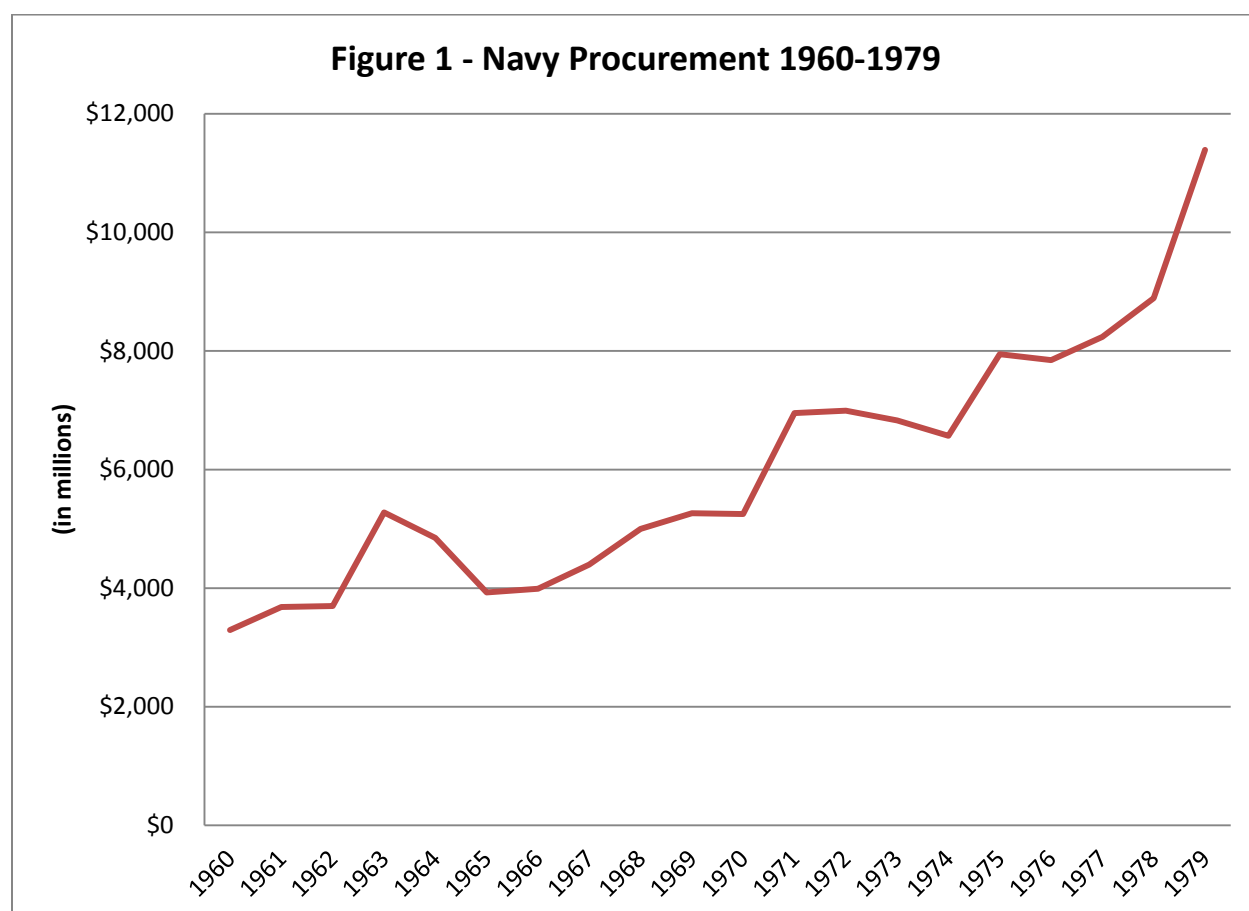
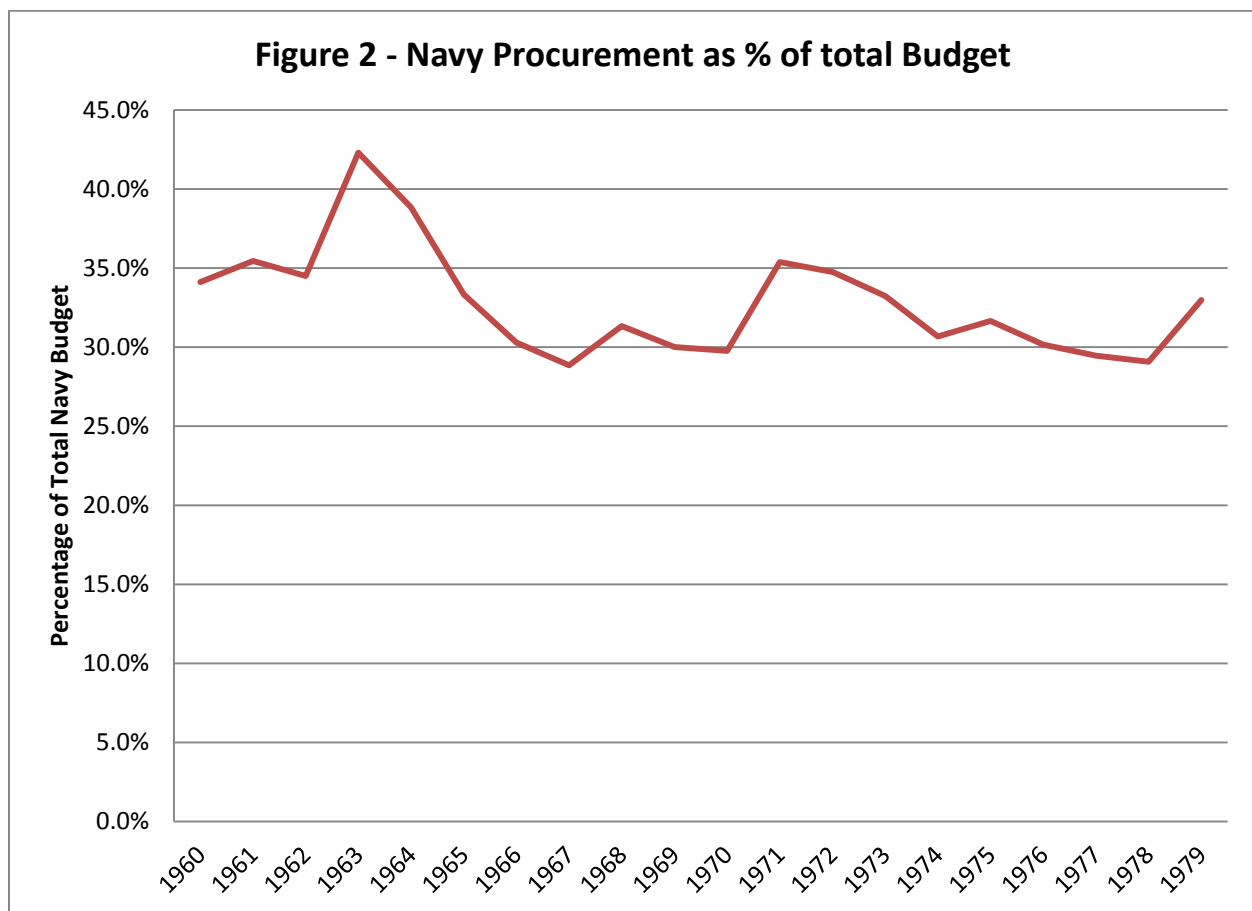


Figure 1 shows Navy procurement spending in dollars during the 1960s and 1970s. Procurement spending drops in conjunction with the ramping up of activity in Vietnam in 1964-1966, and again during President Nixon's cuts of 1971-1974. Figure 2 shows the same procurement dollars represented as a percentage of the Navy's budget. The drop of the early 1960s corresponds with the decrease in the percent of funds allotted to procurement in order to fund naval operations in support of the Vietnam War. Despite the dramatic increase in funds in the late 1970s shown in Figure 1, the percentage of dollars allocated to procurement remained near 30 percent.



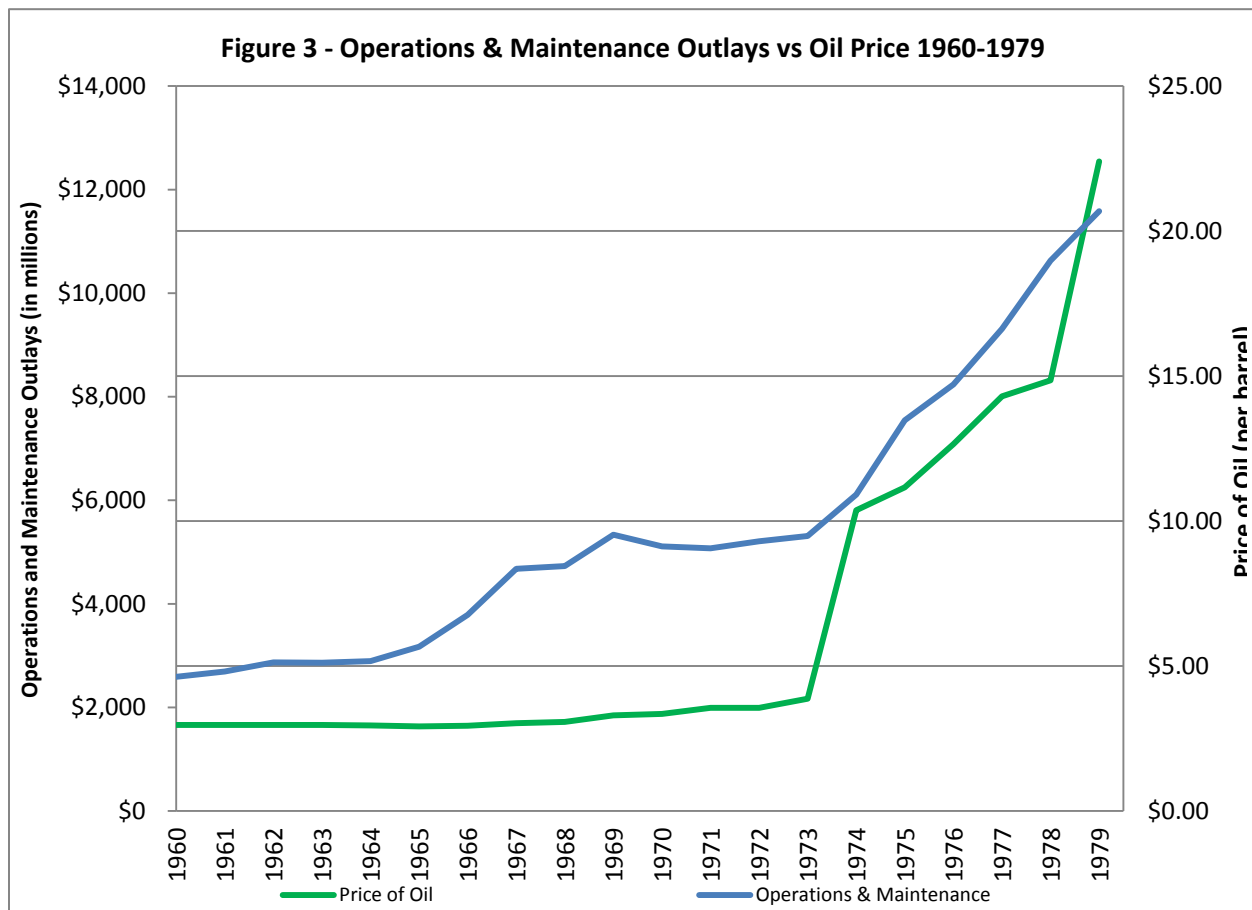
Admiral Zumwalt served as Chief of Naval Operations for much of the Nixon administration. Challenged with declining budgets and an aging fleet, Admiral Zumwalt set out to find creative ways of maintaining, if not increasing, the Navy's advantages at sea. Given the

focus on the Soviet threat, Zumwalt sought increasing overseas basing in Japan and Greece. Overseas basing increased presence without demanding long and costly deployments from the continental United States. With no carrier construction started between 1972 and 1979, Zumwalt could not deliver the presence required without overseas basing. He simply did not have the carriers to do it.³ Nor did he have much money for other ships.

In reviewing the defense budget for 1971, Vice Admiral Eli T. Reich, then Deputy Assistant Secretary of Defense (Installations & Logistics) for Material, noted that Navy ship numbers and budgets peaked in consonance with the wars being fought. Specifically, the fleet count peaked in 1945, during World War II, 1953 during the Korean War, and again in 1968 during the Vietnam War. The planned outlays looking forward into the 1970s showed reduced numbers. Like Admiral Zumwalt, however, Vice Admiral Reich stressed that these numbers were not cause for concern, because the new ships coming into the fleet would make the Navy more modern.⁴ What Zumwalt and Reich did not yet understand were the long-term impacts of all of the forces at play.

The price of oil remained relatively constant during the 1950s and 1960s. Navy planners could formulate the Operations and Maintenance request with confidence that fuel costs might be reasonably predicted. That changed permanently at the end of 1973. The price of a barrel of oil more than doubled in less than one month, from \$4.31 on December 1, 1973, to \$10.11 on January 1, 1974.⁵ Operations and Maintenance outlays, normally second to, and far behind Procurement outlays, accounted for roughly 25% of Navy spending prior to the change in oil price. By the end of the decade, however, Operations and Maintenance outlays overtook Procurement outlays and accounted for nearly 35% of the Navy's budget. Figure 3 shows the increase in Operations and Maintenance outlays from 1960 to 1979 with the corresponding price

of a barrel of oil. With oil costing over \$20/barrel by the end of the decade, the relationship between the Operations and Maintenance budget and oil as a prime factor is easily seen.



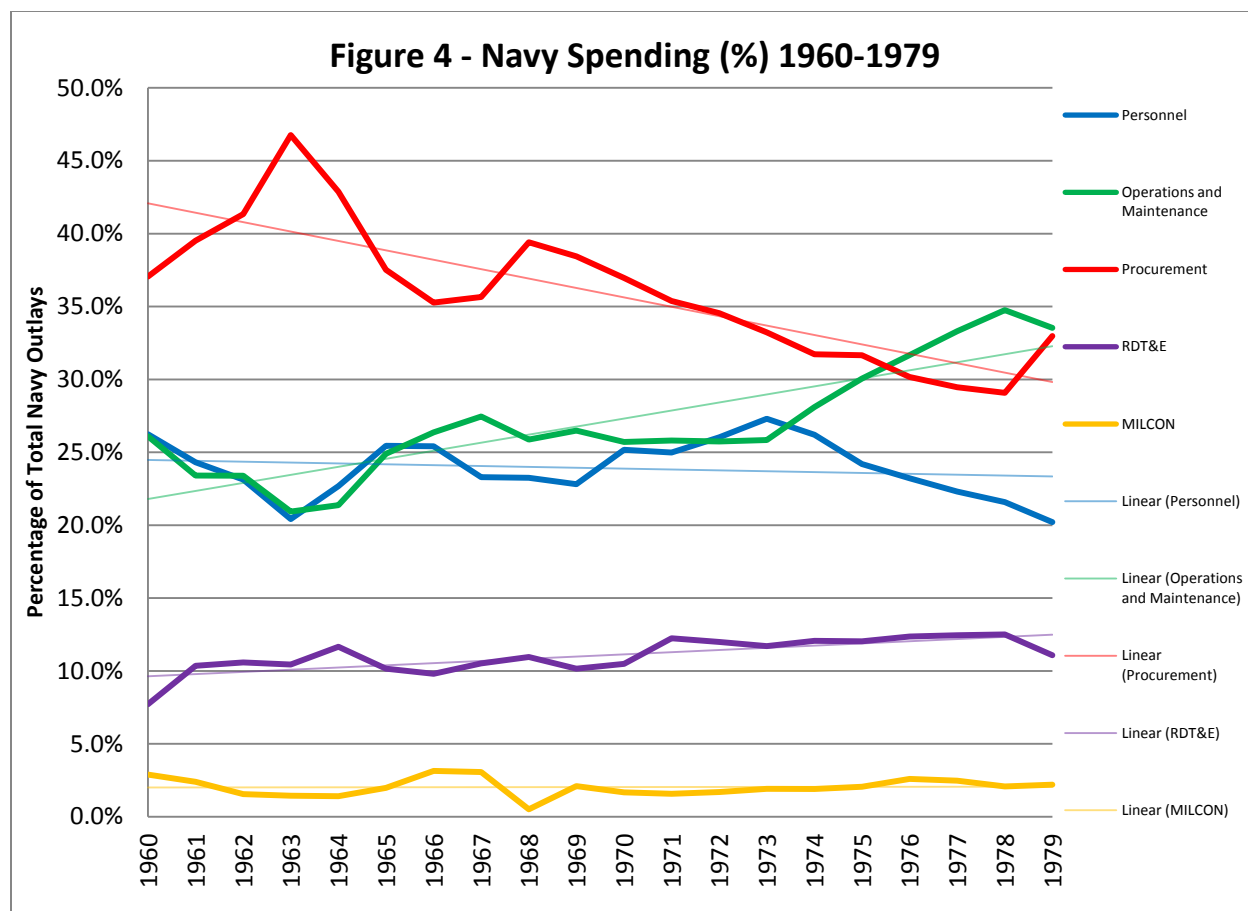
Increasingly, the 1970s American military became described as a hollow force, a military that appeared robust and capable on paper, but in fact lacked capability. According to a Center for Naval Analysis (CNA) study, the “hollowness” of the 1970s had seven specific causes:⁶

- Low public support for the military
- Pressure to cut defense spending
- Difficulties in maintaining an all-volunteer force
- Declining pay
- Poor morale

- Delays in fielding modern armaments and equipment
- Inadequate attention to maintenance of existing equipment

More generally speaking, the study blames all of these causes on the Vietnam War. Certainly, Vietnam played a significant contributing role to the reduction in naval capability, but further, broader examination is warranted. Understanding that wars and subsequent budget reductions, lay waste to existing plans, the Navy ought to have been better prepared when the United States withdrew from Vietnam. The Navy did not have plans to adjust to the change in oil prices, a major factor driving Operations and Maintenance outlays upward in the late 1970s. Hindsight permits such analysis, but any such analysis is only beneficial if utilized going forward.

What then can be concluded about Navy budget actions during the 1960s and 1970s that led to the hollow force? Figure 4 shows spending for the five major outlays as a percentage of the total budget, as well as trend lines for each curve. Military Construction stayed relatively consistent despite the dynamic fluctuations in the overall budget. Research, Development, Testing and Evaluation (RDT&E) grew steadily. Because of the dramatic reduction in force from 765,000 in 1968 to 522,000 in 1979, personnel costs actually decreased, despite the cost per sailor going up. The significant increases in Operations and Maintenance and similar reductions in Procurement outlays demonstrate a decision to reduce acquisitions in order to maintain operations at sea. It does not appear that any attempt at lessening Research, Development, Testing and Evaluation outlays was strongly considered, as they rose consistently throughout the period. By not replacing older ships and cutting manpower dramatically to adjust for the rising cost of keeping ships at sea and aircraft flying, the Navy, likely at the behest of political direction, chose the short-term over the long-term.



The 1990s

Two major developments shaped U.S. military trends in the early 1990s. First, the stunning victory of the U.S.-led coalition over Iraq in Operation DESERT STORM in early 1991 demonstrated the lethality and capability of the United States' all-volunteer force. Clearly, the hollow force of the 1970s faded during the 1980s. Secondly, the dissolution of the Soviet Union on December 25, 1991, provided an ending to the Cold War. In the view of many, the United States no longer needed a large military ready to fight a long and bloody war in Europe. A much smaller military could take advantage of technology, as demonstrated in DESERT STORM, in responding to any contingency. Determining how much smaller the military could be, and how rapidly to make cuts became the question of the day.

Even before the fall of the Soviet Union and DESERT STORM, President George H.W. Bush's administration recognized the coming end to the Cold War. The 1990 DoD budget reflected this understanding by planning for a marked decline in spending for a period of three to five years. These cuts continued a trend begun under President Reagan's administration in fiscal year 1986. Upon assuming office in January 1993, President Bill Clinton tasked Secretary of Defense Les Aspin to conduct a review of his department's spending plans. The "Bottom-Up Review" settled on a planning assumption of the U.S. military needing to maintain the capability to fight two nearly simultaneous "Major Regional Contingencies," such as DESERT STORM.⁷ President Clinton's stated desire to cut even more from the DoD budget than President Bush had already planned created strong resistance within Congress. Senator John McCain led those who warned of a return to the 1970s' hollow force.

In July 1993, Senator McCain's office published "Going Hollow: The Warnings Of Our Chiefs Of Staff." Utilizing statements before the Senate Armed Services Committee and answers to questions submitted to the service chiefs, Senator McCain concluded that the U.S. military was again "going hollow," and losing the readiness that had been demonstrated just three years before during Operations DESERT SHIELD and DESERT STORM. Senator McCain highlighted several stresses facing the military, asserting these stresses affected all services to some degree. These stresses include:

- Shifting funds from maintenance accounts to pay for a high operational tempo
- Backlogs of depot-level maintenance
- Underfunding manpower, both in quality and end-strength
- Underfunding modernization and life cycles of existing equipment

- Using readiness funds to pay for humanitarian and peace-keeping missions while cutting the readiness account

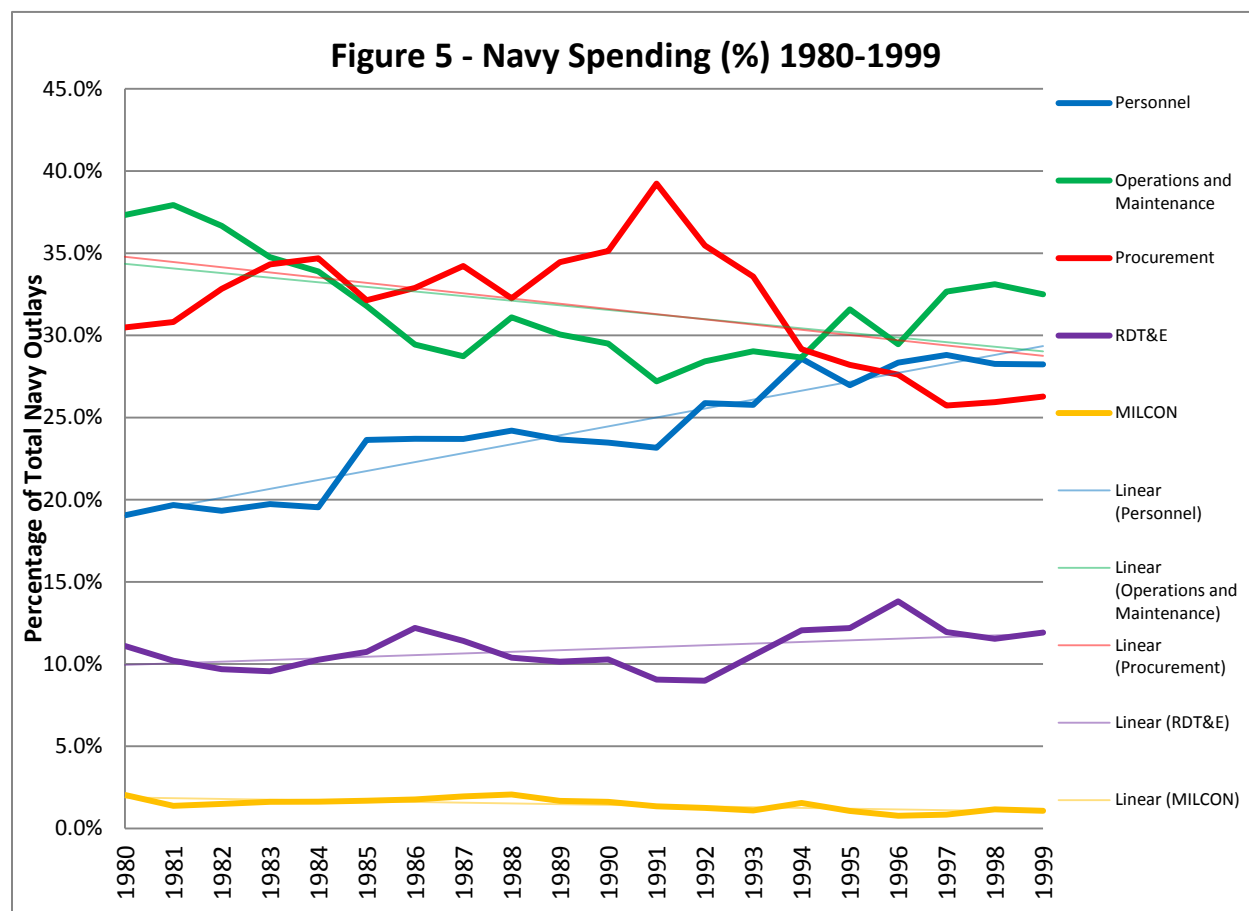
Senator McCain warned, “It is terribly easy to create a ‘paper tiger:’ A force that looks good on a spread sheet and which is inadequate in the field.”⁸

The Clinton Administration responded to the criticism of Senator McCain and others in Congress by establishing a readiness task force. The task force acknowledged “legitimate concerns” regarding readiness and recommended changes designed to keep readiness at a high level. For the rest of its time in office, the Clinton administration added to the Operations and Maintenance (O&M) accounts, but did so at the expense of procurement. DoD’s annual target for procurement of \$60 billion wound up grossly underfunded at \$45 billion between FY94 and FY98. U.S. forces’ operational tempo did not provide relief either. Military operations in Haiti, Bosnia, Kosovo, and Iraq kept the force in a high state of activity, affecting maintenance and personnel.⁹

For its part, the Navy shared many of the burdens highlighted above but felt it could maintain readiness. Specifically, Admiral Kelso, Chief of Naval Operations, explained to Senator McCain that while the Navy was “not fully funded for overhauls and major depot maintenance, we believe the risks associated with maintenance backlogs in our budget are acceptable.” Further, Admiral Kelso stated “Declines in readiness due to depot maintenance deferrals are unlikely to show up for at least two years.” Admiral Kelso acknowledged that while the Navy adequately met its current requirements, its ability to absorb any unexpected costs due to unfunded operations was non-existent.¹⁰

How the Navy got back to a state where it worried about being hollow is not a mystery. Changes begun to correct the hollow force began in earnest under the administration of President

Ronald Reagan. Efforts to improve the quality of life for the all-volunteer force led to a dramatic increase in outlays for personnel. The stabilizing and gradual drop in oil prices, after peaking in early 1980 at \$39.50/barrel, allowed Operations and Maintenance spending to decrease as a relative percentage of the Navy's budget.¹¹ Procurement enjoyed a revival as the top outlay briefly under Presidents Reagan and George H. W. Bush before the end of the Cold War. While spending for all outlays generally increased until 1991, Figure 5 shows that the percentage spent on Operations and Maintenance and Procurement fell between 1980 and 1999, while spending on Personnel outlays increased dramatically. Outlays for Research, Development, Testing and Evaluation continued to trend toward a greater share of the Navy's budget during the same period.



The 1990s concluded without the development of a second hollow force. The U.S. military, and more specifically the Navy, continued to answer its government's call whenever needed. Recruiting and retention goals consistently fell short, however, and weapons procurement continued to lag in order to fund operations and maintenance. Thus, while the force was not hollow, it was instead very old in terms of equipment. The procurement budget did not begin to climb until FY98, accelerating after FY2000.¹²

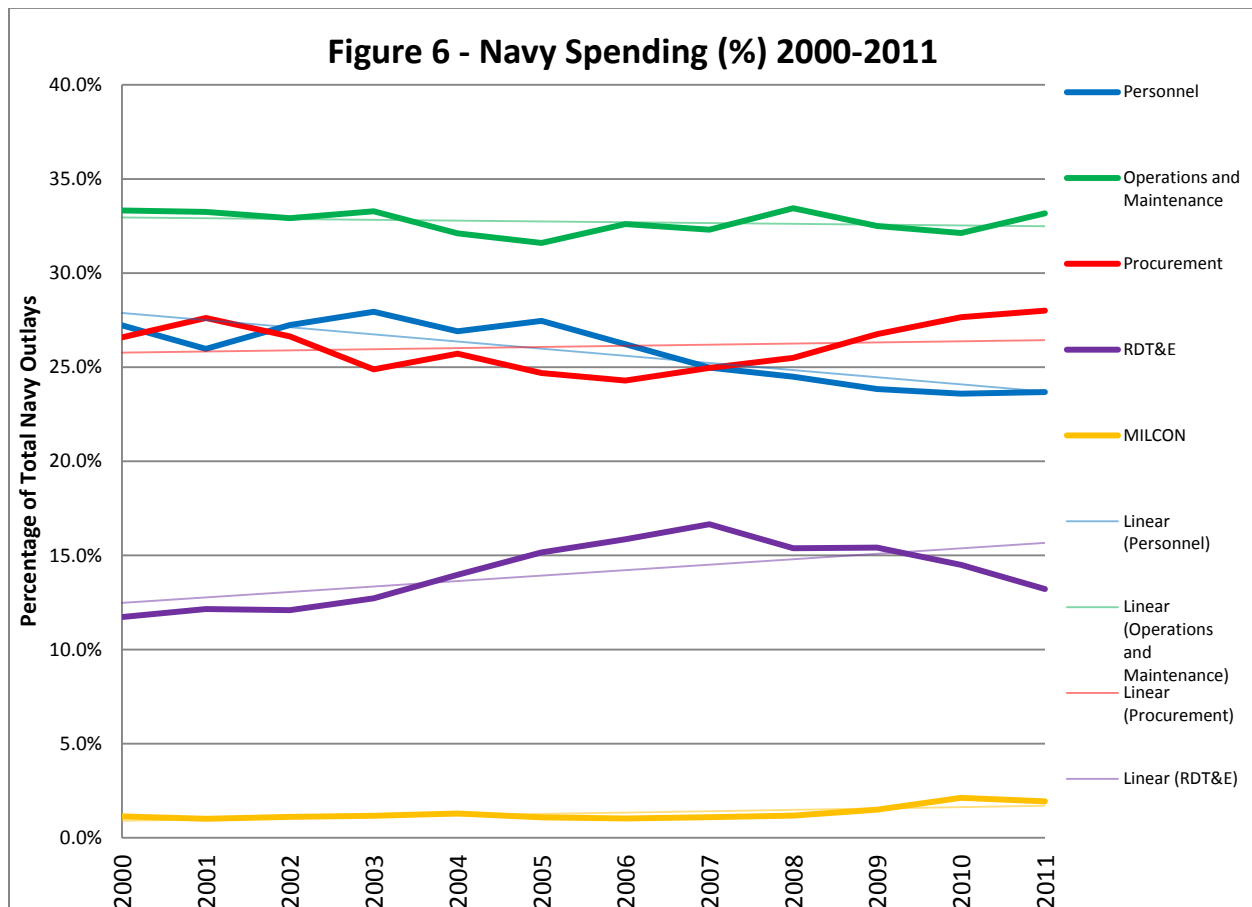
Today

Today, the Navy faces questions similar to those of the 1970s and 1990s. With major operations in Afghanistan expected to end in 2014 and a huge federal deficit and debt creating pressure for large defense spending cuts, the Navy is looking for savings, while also attempting to maintain readiness. Former Secretary of Defense Leon Panetta stated, "Even as the United States addresses fiscal challenges at home, there will be no hollow force on my watch."¹³ Elected and appointed government leaders, military leaders, and think tanks speculate on what changes should and will happen, but plans last only as long as an approved budget and remain subject to change.

Once again, the Navy deals with uncertainty regarding oil prices. Since the turn of the century, the price of oil has increased dramatically, going up from \$27.18/barrel in January, 2000, to \$95.32 in February, 2013.¹⁴ Not only has the price gone up, volatility in oil prices makes planning even more challenging. Operations at sea become ever more expensive, forcing fleet commanders to reduce at-sea training periods and flying hours for pilots. Despite the improvements in synthetic training for ships and simulators for pilots, readiness suffers. Depot-level maintenance periods for ships, submarines, and aircraft are deferred until just prior to

deployment in order to fund those currently on deployment or about to deploy. The maintenance accounts suffer to fund operations.

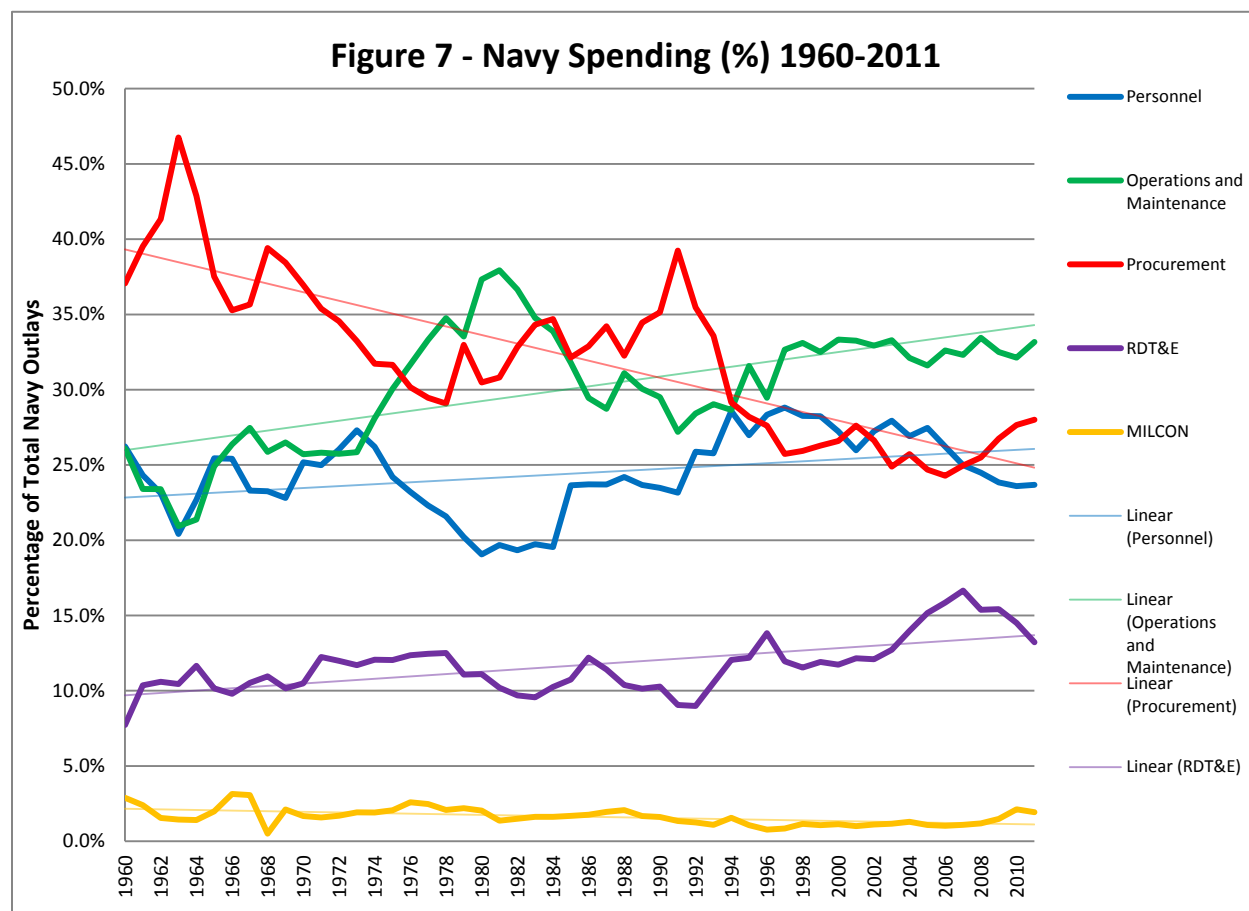
The wars in Afghanistan and Iraq caused the Navy again to increase its operational tempo. Tensions around the world and the demand for expeditionary naval and marine forces keep this tempo high, with no relief in sight. Increased benefits for Department of Defense personnel make sailors more expensive than ever. The Navy again cut end strength to balance against this increased cost, decreasing from 383,108 personnel in 2002 to 325,123 in 2011.¹⁵ As shown in Figure 6, Operations and Maintenance, Procurement and Military Construction outlays have remained relatively steady since 2000, while reductions in personnel costs facilitate continued increases in Research, Development, Testing, and Evaluation outlays.



To date, the Navy appears to balance its many competing demands and mitigates budget constraints as best it can. Chief of Naval Operations Admiral Jonathan Greenert has announced the Navy's intention to maintain its current force structure of Carrier Strike Groups and Amphibious Ready Groups with embarked Marine Expeditionary Units. Force levels for aircraft carriers, carrier air wings, and amphibious shipping remain unchanged. Introduction of new technology and platforms into the fleet such as the Littoral Combat Ship, *Zumwalt* class destroyer, *Ford* class aircraft carriers, and the Joint Strike Fighter continues, while older platforms, such as seven *Ticonderoga* class cruisers and two *Whidbey Island* class dock landing ships are being decommissioned to save money. Fully funding planned ship and aircraft maintenance will ensure platforms reach expected service life. Lastly, an emphasis on synthetic training, which saves money by not burning fuel at sea, provides savings in operations and maintenance.¹⁶ All of these initiatives sound good, but what they actually mean in terms of numbers is more difficult to calculate.

Looking at the trends for all three time periods together (Figure 7), the trend lines reveal remaining issues. Procurement, though leveling out in recent years, has fallen dramatically over time. Whereas procurement used to account for 35% of Navy spending, it now accounts for only about 25%. Personnel cost far more individually today than 63 years ago, but the Navy has kept that number to around 25% of overall spending. A yet undetermined question is how low the Navy's endstrength can go. As ship and aircraft numbers continue to fall, and new technologies reduce personnel requirements, the Navy is likely to continue cutting personnel. Operations and Maintenance outlays are likely to remain the top consumer of Navy dollars. Since the mid-1990s, outlays for this area have exceeded all others. Military construction remains unchanged at a small fraction of the budget, between one and two percent. Research, Development, Testing,

and Evaluation outlays have grown in each time period evaluated. Over the course of the last 63 years, it has risen from less than 10% of the budget to nearly 15%.



Trends and Lessons Identified

What do the data above tell us? First, the Navy tends to be highly reactive with its budget when circumstances or leadership dictates that it should do so. The positive side of this statement is that the Navy demonstrates organizational flexibility that allows it to accomplish missions on short notice. The negative aspect is the tendency to shift money from other necessities to facilitate that agility. For example, Operations and Maintenance outlays increased dramatically in response to the escalation of U.S. military efforts in Vietnam in the mid-1960s. The Navy spent more money to pay to keep ships at sea. Outlays for Operations and

Maintenance again spiked when the price of oil suddenly departed from historic norms in the mid-to-late 1970s. A greater percentage of the budget again funded Operations and Maintenance to keep the ships at sea, despite the dramatic change in the cost to do so. As mentioned previously, money within this account often shifted from maintenance to operations to fund the additional consumption of fuel. While it appears that both operations and maintenance are funded, the reality is that the account tends to skew as the result of operational pressures. Trends occur in other budget outlays as well.

The second notable trend in the data is the ebb and flow of procurement. When the economy is healthy, and no external pressures like war or oil prices affect Operations and Maintenance outlays, procurement usually trends toward a greater percentage of the Navy's budget. This is true of the early 1960s and mid-1980s to early 1990s. The Vietnam War, escalation in oil prices in the mid-to-late 1970s and operational tempo of the Navy post-September 11th all drove procurement outlays downward to the point where procurement outlays lagged behind Operations and Maintenance, and sometimes personnel costs.

Personnel costs are the third identifiable trend. More precisely, the relatively modest increase in outlays for supporting personnel is somewhat astonishing given that the cost of an individual sailor has increased dramatically during the 51-year period examined. The Navy accomplished this by deliberately reducing its manpower requirements. Despite currently having a force (approximately 325,000) less than half the size of its 1968 force (765,000), the Navy essentially spends the same portion of its budget on personnel (23.3% in 1968 versus 23.7% in 2011). As personnel costs continue to rise, however, it begs the question of how much longer the Navy can continue to cut personnel to keep that percentage consistent with past norms. In December, 2012, Vice Admiral Van Buskirk, Chief of Naval Personnel, stated that the Navy cut

too many sailors, and in fact has to add personnel to meet operational commitments.¹⁷ If this statement is correct, then the point where the personnel account begins to grow – to the detriment of other accounts – has already been reached.

Personnel costs are extremely difficult for the Navy to control, however. The vast majority of personnel costs, basic pay, housing and subsistence allowances, G.I. Bill and other benefits are set by the Department of Defense and Congress. The Navy has very little say, except in the number of personnel it maintains. The Navy is also constrained by older ships with a relatively fixed manning level. Even if improved technology exists in new ships that can reduce the number of people needed, those gains in efficiency are only realized when the older, more manpower intensive ships are decommissioned. New aircraft tend not gain any manpower advantage as aircrew are still required.

The final noticeable trend in the data is the slow, but steady increase in Research, Development, Test, and Evaluation outlays. In each period examined, outlays for Research, Development, Test, and Evaluation trended upward, gaining a greater share of the Navy's budget. By the mid-2000s, Research, Development, Test, and Evaluation outlays actually accounted for over 15% of the Navy's budget, well above any other years examined in this paper.

If maintenance dollars are funding for today's fleet and procurement dollars are funding for building tomorrow's fleet, then Research, Development, Test, and Evaluation dollars are funding development of the future fleet. This analogy is important because it highlights a fundamental flaw in how the Navy spends its money. When war breaks out, or oil prices spike, money is diverted from maintenance to operations accounts to make up for the difference between what was planned for and what actually needs to happen. Today's fleet suffers as a

result. If the budget pressures are sustained over several years, procurement of tomorrow's fleet suffers as a result. Yet, the funding to plan the fleet of the future continues to increase steadily. This trend does not make sense. Technological advantages enable victory at sea. The Navy should not abandon its desire to maintain its edge. That said, to maintain its ability to fight and win today, it cannot continue to sacrifice the current and near-term fleet in pursuit of the fleet-to-be 20 years hence.

Priority must be given to maintaining the equipment currently in the inventory to maximize readiness in this era of uncertainty. It cannot be assumed that we have years or decades of relative peace coming just because the United States is choosing to end its current operations in Afghanistan. Our potential enemies can choose to put the United States right back in to another war should they so choose.

Overseas basing can also offer budgetary relief by reducing the costs (mostly fuel) associated with transiting ships back and forth between the United States and areas requiring forward presence. Because the issue of homeporting has larger geopolitical and strategic implications, this paper cannot recommend overseas basing purely for budgetary relief. Where overseas basing makes fits within the larger national strategy, however, the collateral benefit of cost savings from reduced fuel consumption should be factored into the Navy's decision.

Recommendations

How then should the Navy approach budgetary decisions in order to avoid hollowing out the force in the future? Based on the analysis of previous periods of cutting, and those of growth, this paper recommends the following:

- Adjust Research, Development, Testing, and Evaluation spending, capping RDT&E at no more than 10% of the Navy's budget in order to return to the lower historic norm and

allow more money for maintenance of the existing fleet. Increase the priority of RDT&E efforts focused on cost savings. The two major cost drivers that the Navy cannot easily control are cost-per-sailor and fuel. The only way to combat rising personnel costs, is to continue to reduce the number of personnel needed to accomplish the mission. Finding technologies that allow the Navy to reduce crew sizes, while maintaining fighting and damage control capability is vitally important. The power and speed required for combat situations are not required for daily at-sea operations. Designing new engineering plants, or capitalizing more fully on existing diesel plants, that save money in peacetime and transit steaming can yield significant fiscal relief.

- Separate Operations outlays from Maintenance outlays. Too often the Navy has moved money within this category to meet operational needs at the expense of maintenance.
- Set Maintenance Outlays as inviolate funds to prevent ships and aircraft from expiring before expected service life. Fully-funded maintenance ensures platforms that are mission-ready and higher morale for the force as a whole.
- Target 30 percent of outlays for procurement. Recent history demonstrates that the Navy gets out-of-date quickly when outlays dip below this level, where they currently reside.

These recommendations are more about an attitude change than any specific action, though specific actions help. The Navy has a hard time admitting the real long-term consequences of meeting short-term needs. In the end, the orders from the civilian leadership will always be followed, but the military advice that precedes those orders needs to be very clear as to the impacts. By establishing goals for outlays and controls, such as preventing maintenance funds from being stripped to support operations, the Navy could make cost/benefit decisions more

clearly to leadership by requiring a reprogramming of maintenance dollars. Shifting within a single account avoids tough conversations about collateral impacts that need to occur.

Conclusion

The Navy today finds itself at a fiscal crossroads. This territory is hardly new. Though not identical, similar forces have pressed the Navy's budget in the past. Rather than treating this period as it has previous periods of austerity, the Navy instead needs to change its attitude regarding spending. Maintaining the current force at a sufficient state of readiness, while balancing procurement of the future fleet and researching creative solutions to technological challenges should be the Navy's focus. Short-term mission accomplishment that robs the fleet of long-term viability by shifting money from maintenance to operations cannot continue without detriment to the future force. For operations other than combat, such an attitude change is essential.

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